

IN THE DRAWINGS

Please replace Fig. 7 currently on file with the substitute Fig. 7 in which the legend "PRIOR ART" is being added, and as set forth in the attached Letter to the Draftperson.

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated August 2, 2007. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, claims 5-6 and 8-18 stand for consideration in this application, wherein claims 5 and 12 are being amended. Claims 1-4 and 7 stand withdrawn from consideration in this application.

Additional Amendments

The drawings are being amended. Specifically, Fig. 7 is being amended to include the legend "PRIOR ART." All amendments to the application are fully supported therein, including page 7, line 14 – page 9, line 13 of the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Formal Objection

Drawings

Fig. 7 was objected to for lacking the legend --Prior Art--. As suggested by the Examiner, Fig. 7 is being replaced with the substitute Fig. 7 as set forth in the attached Letter to Draftsperson. Accordingly, withdrawal of this objection is respectfully requested.

Prior Art Rejections

35 U.S.C. §103(a) Rejections

Claims 5, 6, and 8-18 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Gronbeck (U.S. Patent No. 6,803,171). These rejections are respectfully traversed for the reasons set forth below.

Claim 5

Claim 5 as amended recites a method for producing a dielectric line having a dielectric strip provided between two conductive plates approximately parallel to each other and having a width smaller than that of the conductive plates, and dielectric medium layers filled between the conductive plates other than the dielectric strip and composed of a porous material having a dielectric constant smaller than that of the dielectric strip, the method comprising: a film forming step of forming a film on one of the conductive plates using a dielectric raw material; a strip exposure step of exposing a part of the film of the dielectric raw material to predetermined light, beams, or vapor, the part having a shape corresponding to the dielectric strip; and then a pore forming step of making the entire film of the dielectric raw material porous, wherein porosity of the exposed part of the film is greater than porosity of an unexposed part of the film.

In the method as recited in claim 5, a film of a dielectric raw material is formed on a conductive plate. Crosslinks of the material in an exposed part of the film to a light, beam or vapor are formed, while crosslinks of the material in unexposed part of the film are not substantially formed. Consequently, difference in density is caused between the exposed part and the unexposed part. In the subsequent pore forming steps, difference in porosity is caused between the exposed part and the unexposed part, and thereby difference in dielectric constant is caused between the exposed part and the unexposed part.

In contrast, Gronbeck is directed to a photoimageable composition for a photoresist. Gronbeck shows exposing a coated layer to radiation sources such as ultraviolet, visible, or e-beams, ion-beams and x-rays to render the exposed area less soluble than the unexposed area (col. 23, lines 32-37 and col. 24, lines 55-57). Alternatively, Gronbeck shows that the photoimageable composition may be used as a dielectric material and the dielectric constant of the dielectric material may be lowered by incorporating pores into the dielectric material by removable porogens or solvents (col. 26, lines 25-37). However, Gronbeck does not show or suggest, before incorporating pores into the dielectric material by a removable porogens or solvents, exposing a part of a film formed of a dielectric raw material to the radiation sources to differentiate formation of crosslinks in the material in one part and the other part of the film and whereby the porosity in one part is differentiated from the porosity in the other part in the same film.

Also, Gronbeck does not show or suggest forming a dielectric strip surrounded by the medium of which an electric constant is lower than that of the dielectric strip. Therefore,

Gronbeck cannot and does not show or suggest a strip exposure step of exposing a part of the film of the dielectric raw material to predetermined light, beams, or vapor, the part having a shape corresponding to the dielectric strip; and then a pore forming step of making the entire film of the dielectric raw material porous.

In sum, at the time the invention was made, one of ordinary skill in the art would and could not achieve all the features of the invention as recited in claim 5. Accordingly, claim 5 is not obvious in view of the cited prior art.

Claim 12

Claim 12 as amended recites a method for producing a dielectric line having a dielectric strip provided between two conductive plates approximately parallel to each other and having a width smaller than that of the conductive plates, and dielectric medium layers filled between the conductive plates other than the dielectric strip and composed of a porous material having a dielectric constant smaller than that of the dielectric strip, the method comprising: a first film forming step of forming a first film using a first dielectric raw material on one of the conductive plates; a film removing step of removing the first film except for a part having a shape corresponding to the dielectric strip; a second film forming step of forming a second film using a second dielectric raw material on said one of the two conductive plates which is processed by the film removing step; and a pore forming step of making porous the entire films of the first dielectric raw material and the second dielectric raw material, wherein porosity of the first film is greater than porosity of the second film.

In the method as recited in claim 12, a part of a first film is removed, and a second film is formed in a part of a space where a part of the first film is removed. Then, the entire film including the remaining first film and a second film is made porous so that porosity of the first film is greater than porosity of the second film. In contrast, Gronbeck does not show or suggest removing a part of a first film, and then forming a second film in a part of a space where a part of the film is removed.

Furthermore, the method as recited in claim 12 has substantially the same features as those of claim 5, at least with respect to making porous the film of the first dielectric raw material and the second dielectric raw material in their entirety, wherein porosity of the first film is greater than porosity of the second film. As such, the arguments set forth above are equally applicable here.

In sum, at the time the invention was made, one of ordinary skill in the art would and could not achieve all the features of the invention as recited in claim 12. Accordingly, claim 12 is not obvious in view of the cited prior art.

Claims 6, 8-11, 13-18

As to dependent claims 6, 8-11, and 13-18, the arguments set forth above with respect to independent claims 5 and 12 are equally applicable here. The corresponding base claim being allowable, claims 6, 8-11, and 13-18 must also be allowable.

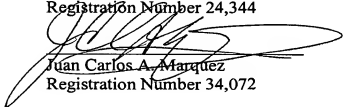
Conclusion

In light of the above Amendments and Remarks, Applicants respectfully request early and favorable action with regard to the present application, and a Notice of Allowance for all pending claims is earnestly solicited.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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